TANDBERG TCD 440 A Circuit Diagrams with Alignment Instructions

Mechanical adjustments, see Service Manual for TCD 330, Ordering No. 714021



Electrical adjustments for the TCD 440A

General

Before adjusting, the tape path must be cleaned and demagnetized. It is necessary that the tape path is correctly adjusted, consult the service manual for the TCD 330, part No. 714021.

Carry out the adjustments in the order described because the adjustments affect each other. Remove the top panel and the base panel.

Equipment required

- 2 millivoltmeters
- Audio signal generator
- Frequency counter
- Distortion meter
- Wow and flutter meter
- Tandberg test cassettes:
 - No. 21 (Speed check, 1000 Hz)
 - No. 22 (Wow and flutter check, 3150 Hz)
 - No. 23 (Azimuth adj. playb. head, 6300 Hz)
 - No. 24 (Playback level adj., 1000 Hz)
- Measuring cassettes:
 - Maxell UD XL I (Type I)
 - Maxell UD XL II (Type II)
 - Fuii Metal or TDK Metal MA-R (Type IV).

Before adjusting, set the buttons to:

- MPX-FILTER (situated at the back of the deck) to OFF.
- Dolby NR.* to Off.
- Output Level controls to maximum.

Before adjusting, fold out page 5.

Oscillator

The oscillator frequency is between 80 and 100 kHz. The voltage measured on the erase head should be between 7 and 9 volts.

* The word "Dolby" is registrerad trade mark of Dolby Laboratories Inc., U.S.A. NR stands for Noise Reduction.

Bias traps

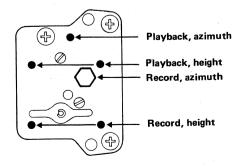
Measure with a millivoltmeter on pin L and R on the oscillator board (see figure) and adjust L1501 and L1601 to minimum reading on the millivoltmeter.

Sensitivity adjustment

- Set the Monitor button to Source position, and Input and Output Level controls to maximum.
- Apply 8 mV, 1000 Hz to the RADIO socket (DIN) or 80 mV, 1000 Hz to the INPUT sockets (Phono) from the audio signal generator.
- Adjust the SENSITIVITY ADJ. potentiometers R101/R201 to obtain 775 mV measured on a millivolt-meter connected to the Dolby encoder output TP1 and TP2 on the Main board, see figure.
- Move the measure probe to the Dolby decoder output R1303 and R1403 on the Dolby board, see figure.
- Adjust the SOURCE LEVEL ADJ. potentiometers R118/R218 to obtain 775 mV.
- Check the frequency response in Source.

Azimuth adjustment, playback level

- Insert a Tandberg test cassette No. 23 or a standard azimuth cassette.
- Set the Monitor button to Tape and connect a millivoltmeter to each channel of the OUTPUT sockets.
- Press the Play button. Adjust the playback azimuth screws shown in the figure to obtain maximum reading on each channel.



Adjustments screws for the heads

Playback level and meter adjustment

- Insert test cassette No. 24.
- Connect a millivoltmeter to each channel of the Dolby decoder output shown in the figure.
- Adjust the PLAYBACK LEVEL ADJ. potentiometers R119/R219 until you read 775 mV on each channel.

When the playback level is correct, adjust the level meter to 0 dB with PLAYBACK METER ADJ. R114 and R214.

Azimuth and height, record head

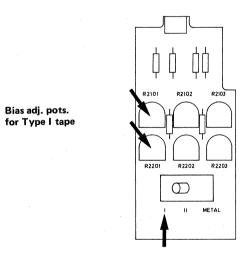
- Set the Bias Selector to I and press the button marked Tape Selector Type I.
- Use Maxell UD XL I or an equivalent Type I tape.
- Apply 1000 Hz to the INPUT sockets both channels.
- Set the Monitor button to Tape and connect a millivoltmeter to the OUTPUT sockets both channels.

NOTE! The record height screws must be adjusted by equal amounts to ensure that the head parallelism does not change.

- Press the Record button and turn the two record head height screws shown in the figure by equal amounts (the same number of degrees) to obtain the maximum reading on both channels of the OUTPUT sockets, or the best compromise.
- Adjust the azimuth (15 kHz) and the height alternatively, until the head sits correctly.
- Azimuth can also be adjusted with the built-in control oscillator (10 kHz).

Overall frequency response with Type I tape (bias)

- Set the Monitor button to Tape and press the Tape Selector Type I button.
- Apply 1000 Hz from the signal generator to one of the inputs (RADIO socket or INPUT sockets).
- Reduce the level at the signal generator by 35 dB or reduce the level by a similar amount on the Input Level controls.
- Press the Record button, and adjust the BIAS ADJ. TYPE I TAPE R2101 and R2201 (see figure) to obtain maximum reading at the outputs.
- Sweep the audio generator through the full frequency range and check that the response curve is correct.
 - NOTE! Remember the azimuth adjustment on the record head.
- If necessary, adjust the curve with R2101 and R2201 to obtain correct response, ± 3 dB, 20 to 20000 Hz.



Bias adjustment board, seen from the component side

Adjusting the record current (Source/Tape) Type I tape

- Use the same input level as for the bias adjustment (- 35 dB) and 1000 Hz.
- Adjust the record current by means of the REC.
 LEVEL ADJ. potentiometers R108 and R208 to obtain the same output level for both positions on the Monitor button.
- Then depress the Dolby NR. button and check the overall frequency response.

Overall frequency response with Type II tape (bias)

- Use the same procedure as for the Type I tape.
- Insert a Maxell UD XL II or an equivalent Type II tape.
- Press the Tape Selector Type II button, set the Bias Selector to II position and press the Record button.

NOTE! Remember the azimuth adjustment on the record head.

Check the frequency response, and if necessary, adjust the BIAS ADJ. TYPE II TAPE R2102 and R2202 (see figure) to obtain the correct response, ± 3 dB, 20 to 20000 Hz.

Adjusting the record current (Source/Tape)
Type II tape

- Use the same input level as for the bias adjustment (- 35 dB) and 1000 Hz.
- Adjust the record current by means of the REC.
 LEVEL ADJ. potentiometers R109 and R209 to obtain the same output level for both positions on the Monitor button.

Overall frequency response with Metal tape

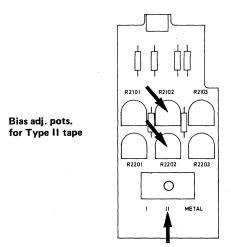
- Use the same procedure as for Type I tape.
- Insert a Fuji Metal or TDK MA-R (Type IV) tape.
- Set the Bias Selector to Metal position. Press both Tape Selector buttons.

NOTE! Remember the azimuth adjustment on the record head.

- Press the Record button.
- Check the frequency response, and if necessary, adjust BIAS ADJ. METAL TAPE R2103 and R2203 (see figure) to obtain the correct response, ± 3 dB, 20 to 20000 Hz.

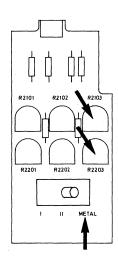
Adjusting the record current (Source/Tape) Metal tape

- Use the same input level as for the bias adjustment (- 35 dB) and 1000 Hz.
- Adjust the record current by means of the REC.
 LEVEL ADJ. R142 and R242 to obtain same output level for both positions on the Monitor button.



Bias adjustment board, seen from the component side

Bias adj. pots. for Type IV (Metal) tape



Bias adjustment board, seen from the component side

Level meters adjustment, record

- Use Type I tape.
- Set the Bias Selector to I and press the Tape Selector Type I button.
- Set the Monitor button to Tape position.

NOTE! Remember the azimuth adjustment on the record head.

- Apply 1000 Hz to the INPUT sockets (both channels).
- Press the Record button and adjust the Input Level controls for 1.5 volt reading on the OUTPUT sockets.
- Adjust the REC. METER ADJ. potentiometers R113 and R213 to obtain 0 dB on the level meters.

DYNEQ adjustment

When the level meters are correct, reduce the level on the audio generator with 10dB. Set the generator to 15 kHz. Adjust with the DYNEQ adjustment R710 and R810, to — 4dB deflection on the level meters.

Distortion

Record 1000 Hz at 0 dB deflection on the meters. The max. distortion for record/playback are:

3% with Type IV tape (Metal tape).

1% with Type I and Type II tapes.

Erase test

Record 1000 Hz at 0 dB deflection on the meters. Record again to erase the 1000 Hz signal and play back to ensure that the signal cannot be heard.

Azimuth meter adjustment

- Set the built-in oscillator to ON.
- Set the Output Level controls to maximum.
- Insert a Type I tape (Maxell UD XL I) and press the Record button.

NOTE! Remember the azimuth adjustment on the record head.

- Adjust R223 AZIMUTH METER ADJ. to approximately — 3 dB deflection on the right meter.
- Check also that the meter deflection with a
 Type IV tape (Metal) is within the meter scale.

NOTE! Remember the azimuth adjustment on the record head.

Speed check

Play back Tandberg test cassette No. 21 (Speed check 1000 Hz) and measure with a frequency counter on the OUTPUT sockets:

 \leq ± 0.5% (995 to 1005 Hz).

If necessary, adjust to correct speed with R2008 SPEED ADJ. on the motor control board.

Wow and flutter check

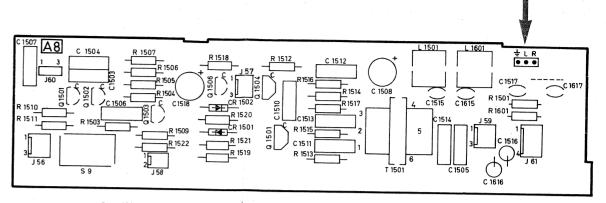
Play back a Tandberg test cassette No. 22 (3150 Hz) and measure with a wow and flutter meter on the OUTPUT sockets:

Weighted RMS: < 0.09% Weighted peak: < 0.14%

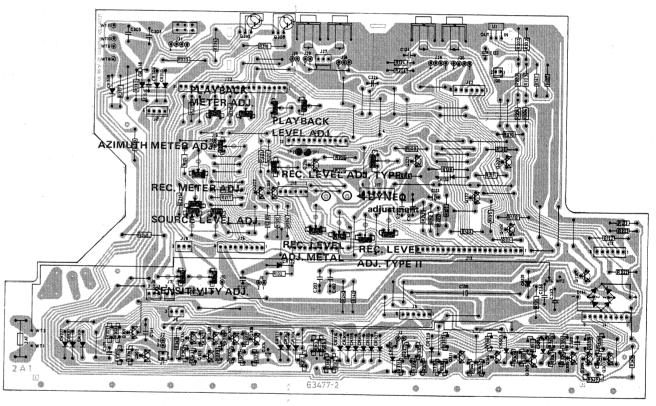
Record/playback

Use a Maxell C-60 UD cassette. Connect the wow and flutter meter generator to the INPUT sockets. Set the deck to Record and record for about half a minute. Wind back the cassette and set the deck to Play. Measure on the OUTPUT with wow and flutter meter:

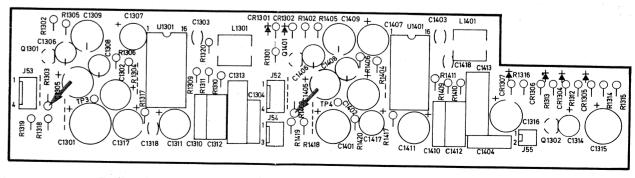
Weighted RMS: < 0.12%



Oscillator measurement points, seen from the component side

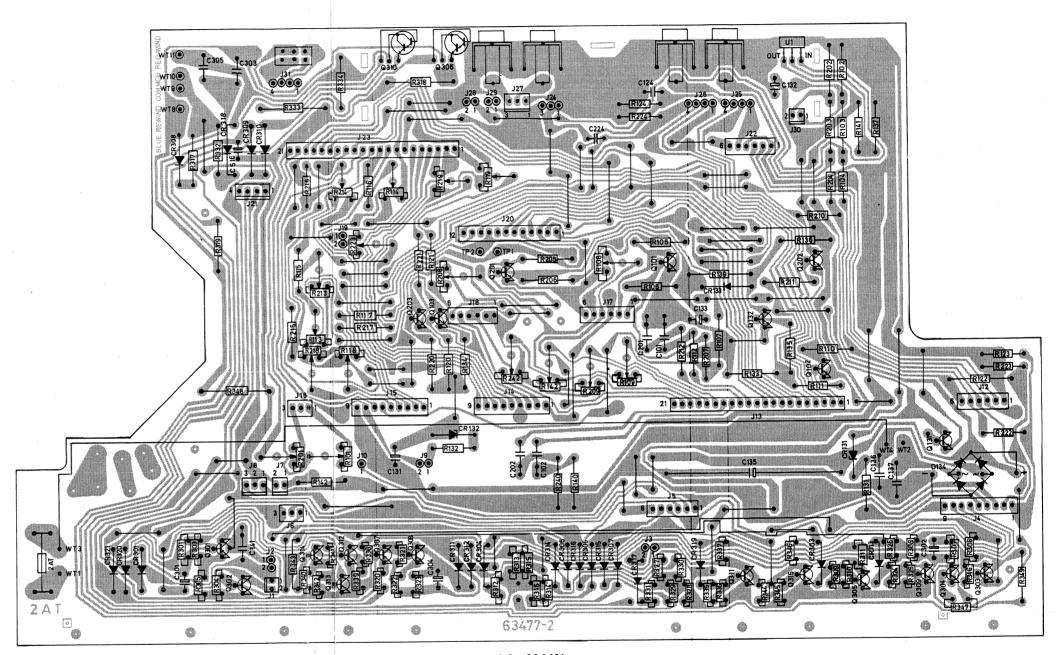


Trimming pots. and Dolby encoder measurement points, seen from the solder side

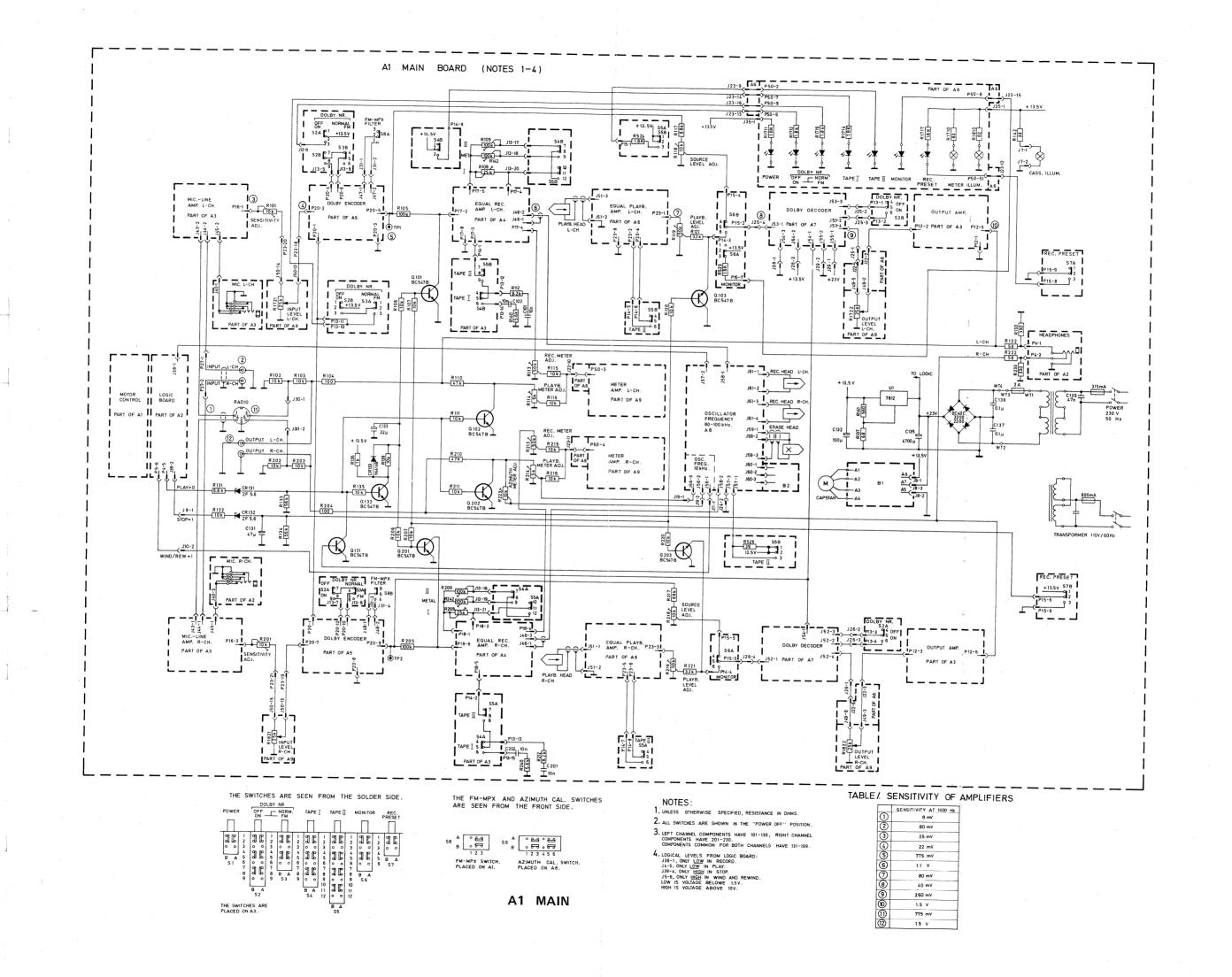


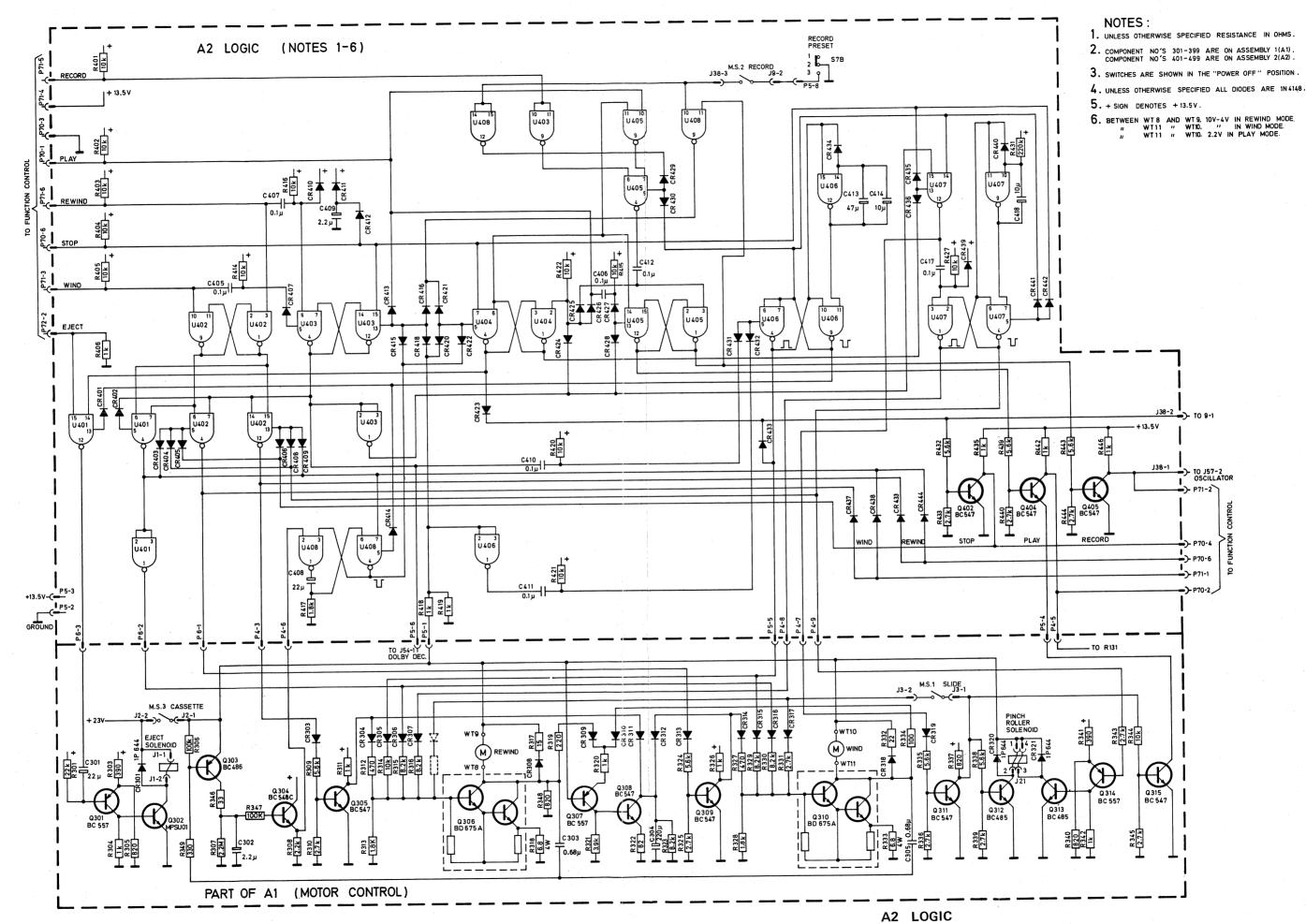
Dolby decoder measurement points, seen from the component side

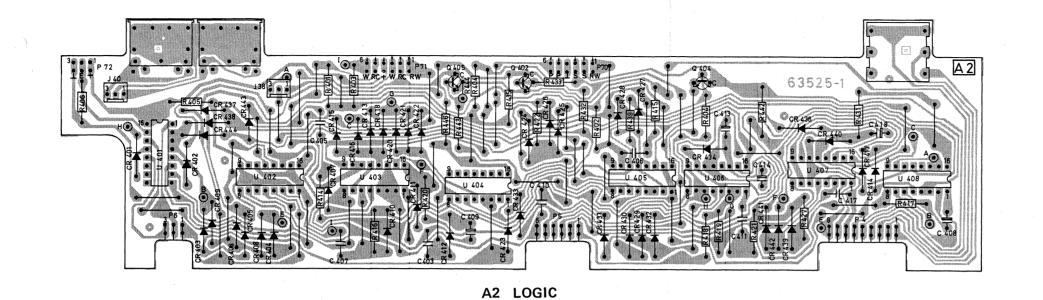
5



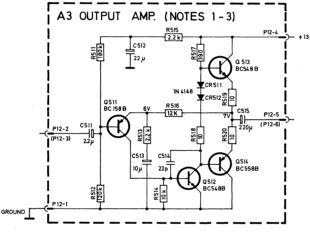
A1 MAIN





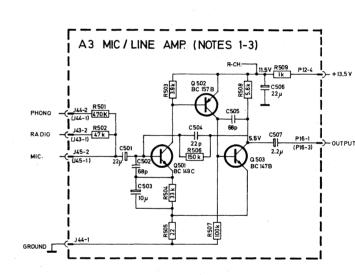






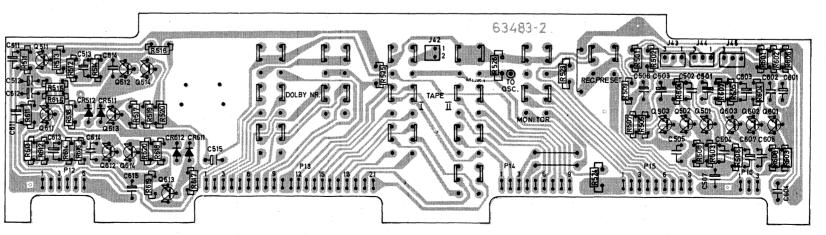
NOTES:

- 1. UNLESS OTHERWISE SPECIFIED RESISTANCE IN OHMS.
- 2. PLUG TERMINAL NO'S FOR THE R-CHANNEL ARE GIVEN IN BRACKETS BESIDE THE L-CHANNEL PLUG TERMINAL NO'S.
- 3.L-CHANNEL HAS 511-599, AND R-CHANNEL HAS 511-599 AS COMPONENT NO'S. WHEN REFERING TO R-CHANNEL COMPONEN ADD 100 TO THE L-CHANNEL NO'S. (E. G. RSII OF THE L-CHANNEL HAS THE SAME YALUE AS R611 OF THE R-CHANNEL.

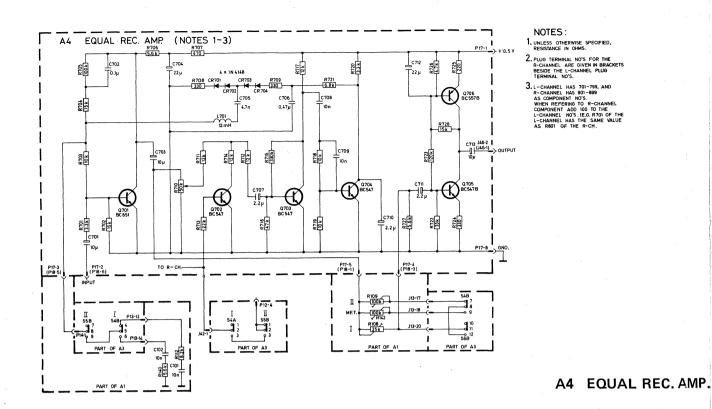


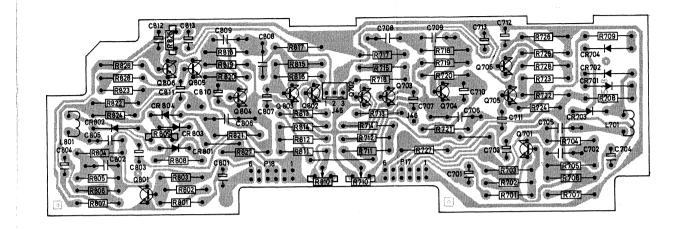
NOTES:

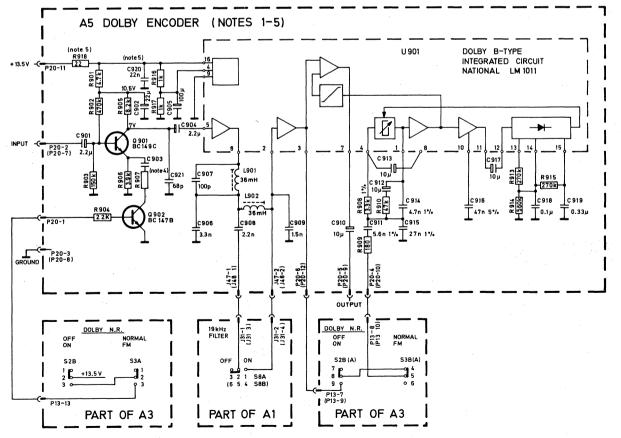
- 1. UNLESS OTHERWISE SPECIFIED RESISTANCE IN OHMS.
- 2. PLUG TERMINAL NO'S FOR THE R-CHANN ARE GIVEN IN BRACKETS BESIDE THE
- 3. L-CHANNEL HAS 501-510, AND R-CHANNEL HAS 601-610 AS COMPONENT NO'S WHEN REFERRING TO R-CHANNEL NO'S ADD 100 TO THE L-CHANNEL NO'S (E.G. R501 OF THE L-CHANNEL HAS THE SAME VALUE AS R 601 OF THE R-CHANNEL



A3 OUTPUT MIC/LINE AMP.

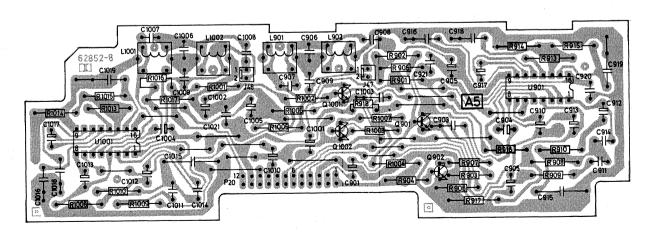




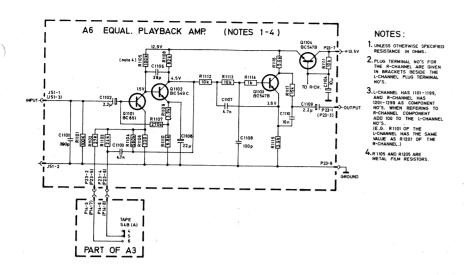


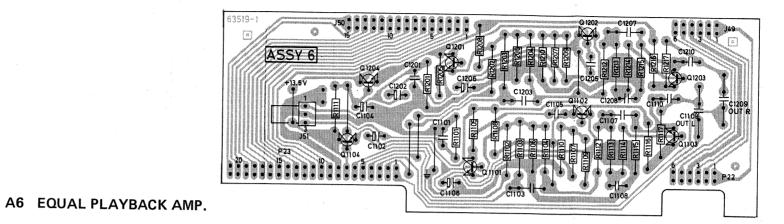
NOTES:

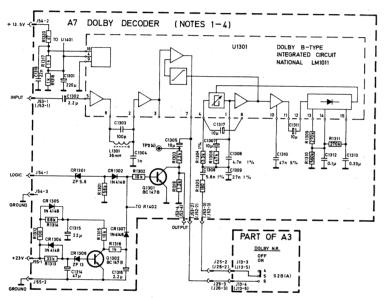
- 1. UNLESS OTHERWISE SPECIFIED RESISTANCE IN OHMS.
- 2. PLUG TERMINAL NO'S FOR THE R-CHANNEL ARE GIVEN IN BRACKETS BESIDE THE L-CHANNEL PLUG TERMINAL NO'S.
- 3. L-CHANNEL HAS 901-999, AND R-CHANNEL HAS 1001-1099 AS COMPONENT NO'S. WHEN REFERING TO R-CHANNEL COMPONENT ADD 100 TO THE L-CHANNEL NO'S. (E.B. R 901 OF THE L-CHANNEL HAS THE SAME VALUE AS R 1001 OF THE R CHANNEL.)
- 4. R907=2.2K, C903=15n GIVES a"75-25" DOLBY FM COMPENSATOR R907=3.9K, C903=12n GIVES a"50-25" DOLBY FM COMPENSATOR
- 5. R918 AND C920 ONLY ON L-CHANNEL.



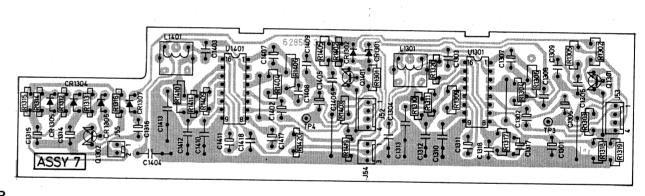
A5 DOLBY ENCODER



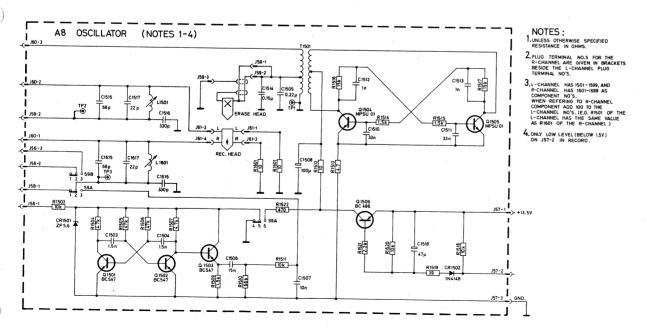


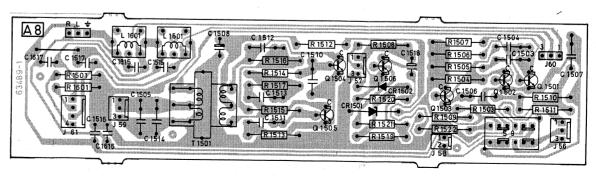




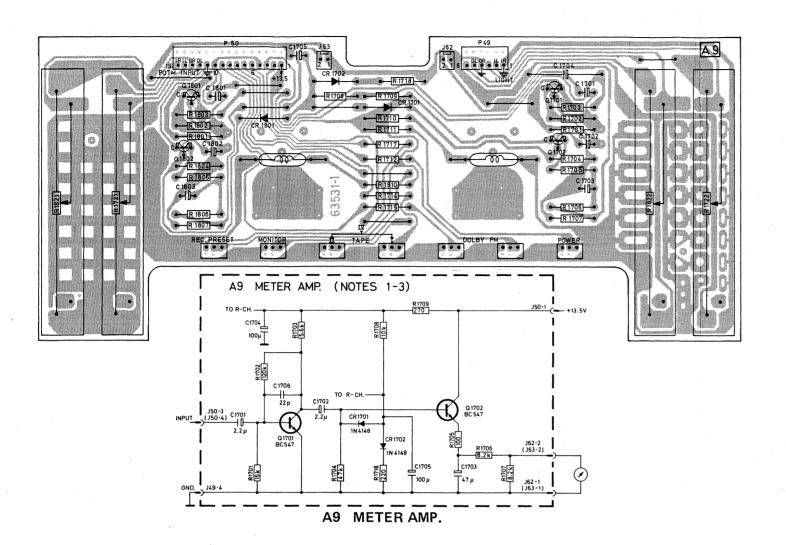


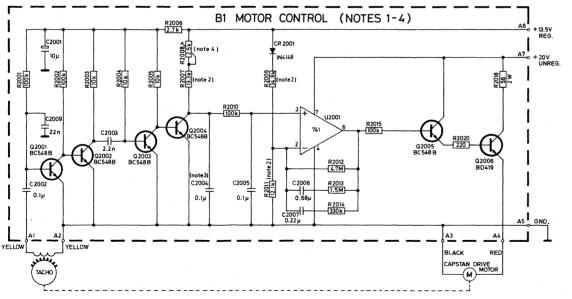
A7 DOLBY DECODER



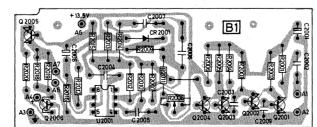


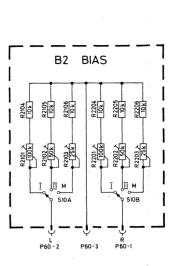
A8 OSCILLATOR

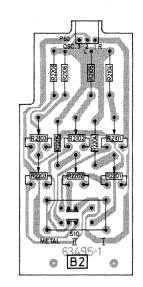




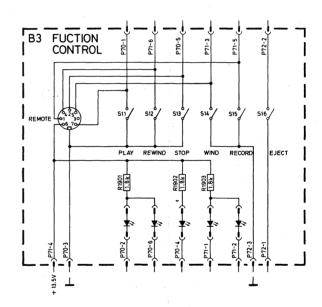
- NOTES:
- 2 P2007 P2009 AND P2011 ARE 19/ METAL FILM DESISTOR
- 3. C2004 = 0.1 5% POLYKARBONAT.
- 4. R2008 THICK FILM VARIABLE RESISTOR.

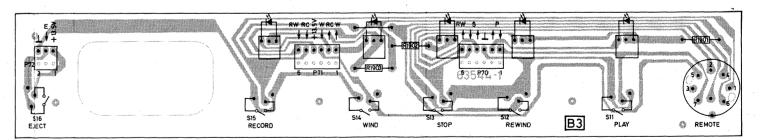






B2 BIAS





B3 FUNCTION CONTROL

1710 - 10 - 79 Part No. 714128 Printed in Norway by Reclamo A/S

TANDBERG TCD 440 A Illustrated Parts List

Bestilling av deler

Ved alle henvendelser, vennligst oppgi apparatets type og serienummer. Ved bestilling av deler, oppgi bestillingsnummer og beskrivelse.

Bestillingsadresse

Kontakt nærmeste Tandberg-kontor eller: Tandberg A/S Sentral Delelager — Service Postboks 53 N — 2007 KJELLER — Norge

Telefon: (02) 71 68 20 Telex: 18007 kurer n

Ordering of spare parts

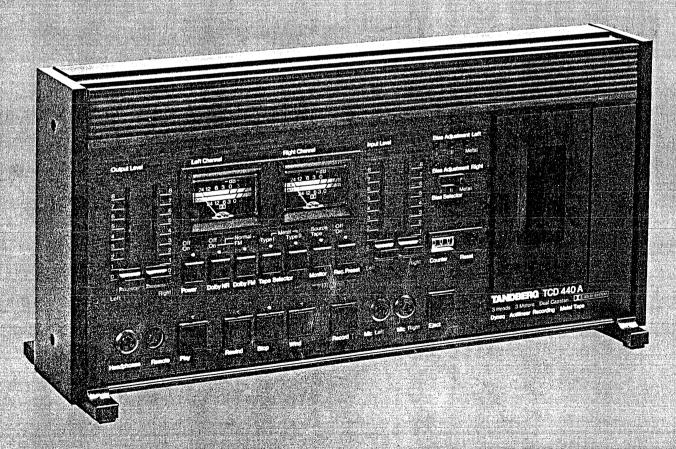
For all enquiries, please state the set's type and serial number.

When ordering, give the part's order number and description.

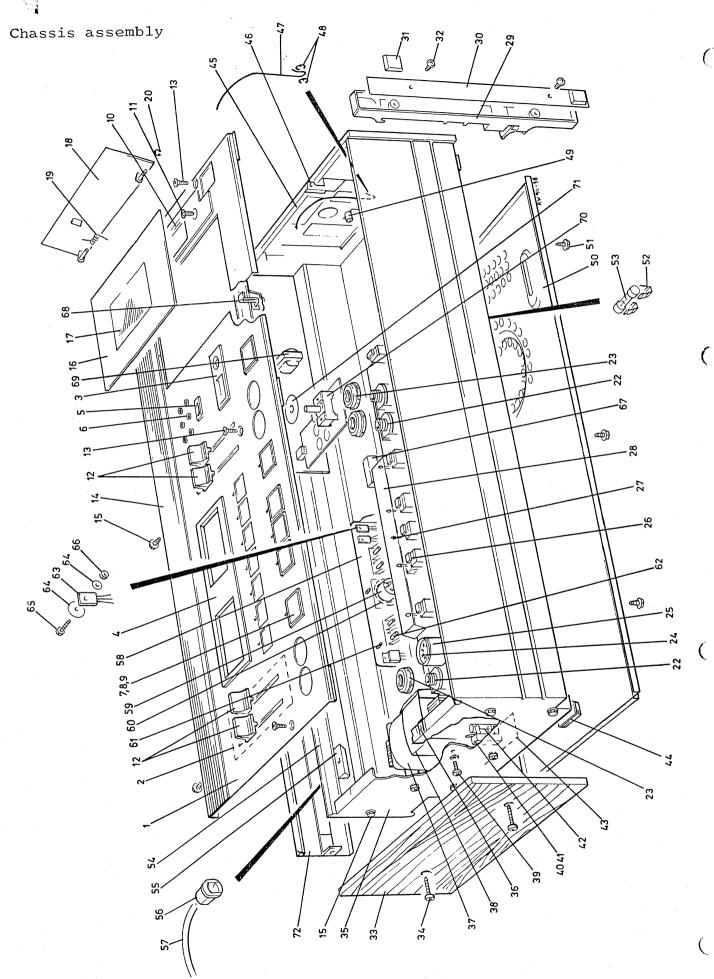
Address

Contact your nearest Tandberg office or: Tandberg A/S Spares Department P.O. Box 53 N — 2007 KJELLER — Norway

Telephone: (2) 71 68 20 Telex: 18007 kurer n

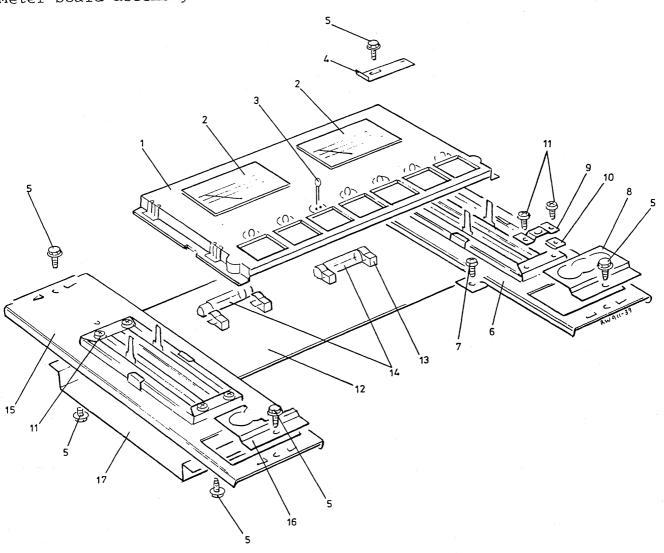


TANDBERG — The European Alternative

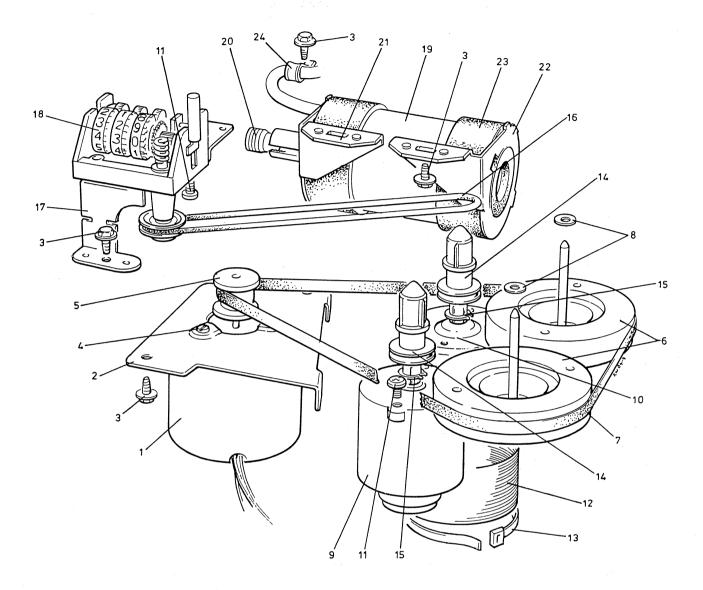


	SPECIFY THIS WHEN ORDERING			
Index	Ordering No.		Description (notes)	Reference
	*	Sjassis-enhet	Chassis assembly	
1	995149	Plate	Plate, top	
2	292581	(lev. m/index 2-11) Plate	(supplied with index 2-11) Mask, felt	
3	313191	Vindu	Window, counter, plastic	
4	374935	Ramme	Surround, meter, plastic	,
5	368958	Ramme	Surround, switch, black	
6	375403	Hylse	Grommet, black plastic	
7 8	361215 376732	Ramme	Surround, push button, plastic Button, push	
9	362860	Knapp Fjær	Spring	
10	346250	Ramme	Surround, plastic	
11	346840	Skrue	Screw, plate, 1/4" No. 4 flange hd, black	
12	994119	Knapp	Knob, black plastic, with spring	INPUT LEVEL, OUTPUT LEVEL
13 14	234206 408691	Skrue Skinne	Screw, plate, 3/8" No. 4 csk hd, black Plate, top	
15	309060	Skrue	Screw, plate, 1/4" No. 6 pan hd	
16	995150	Deksel	Cover	
17	367321	Vindu	Window, plastic	
18	995151	Lokk	Cover, with spindle	
19	345862	Fjær	Spring Ring, circlip, 2.3 mm	
20 21	230542 995146	Skive Skinne	Plate, front	
22	294420	Jack	Socket, jack, 3 pole 1/4"	HEADPHONES, MIC L,MIC R
23	317372	Mutter	Nut	i i
24	365955	Kontakt	Socket, 7 pin DIN 180 degrees	REMOTE
25	365596	Hylse	Surround, DIN socket, plastic	
26 27	364828 352665	Vender Diode	Switch, touch Diode, light emitting, red	
28	*	Plate	Sheet, card	
29	995148	Fot	Foot, pair	
		(lev. m/index 30-32)	(supplied with index 30-32)	
30	*	Plate	Plate	
31 32	324297 309693	Fot Skrue	Foot, rubber Screw, plate, 1/4" No. 4 flange hd	
33	334878A	Kassett	Panel, rosewood	supplied in
33	371229	Kassett	Panel, black	matched pairs
34	262984	Skrue	Screw, plate, 5/8" No. 6 pan hd, black	
35	309599C	1	Plate, side wall, left	
36 37	272739 407520	Mutter Transformator	Nut, plate Transformer	
38	373577B	Plate	Cover, isolation	
39	346854	Skrue	Screw, 3.5 x 6.3 mm hex hd, with collar	
40	357399	Holder	Holder, fuse	
41	340813	Skrue	Screw, plate, 1/4" No. 2 pan hd	115 17
42	270526 279952	Sikring Sikring	Fuse, 800 mA, 5 x 20 mm, slow Fuse, 315 mA, 5 x 20 mm, slow	115 V 230 V
43	290211	Plate	Plate, isolation	230 V
44	227949	Fot	Foot, rubber	
45	349390	Plate	Plate, side wall, right	
46		(lev. m/index 46-49)	(supplied with index 46-49)	
46 47	349964 347543	Brakett	Bracket, cover	
47	239651	Fjær Skive	Spring Ring, circlip, 3.2 mm	1
49	351581	Strompe	Sleeve, rubber	
50	319448A	Plate	Cover, bottom	
51	297925	Skrue	Screw, plate, 5/16" No. 6 flnge hd, black	
52 53	277509 265736	Holder Sikring	Holder, fuse Fuse, 2 A, 5 x 20 mm, slow	230 V
در	289629	Sikring	Fuse, 2 A, 1 1/4" x 1/4"	115 V
54	995147	Skinne	Plate, rear wall	
55	319721	Brakett	Bracket, frame	
56	281454	Tube	Tube, cable, power	
57	357630 346388	Ledning Ledning	Cable, power, with Europlug Cable, power	U.S.A. version
58	348413	Brakett	Bracket	0.5
59	242244	Kontakt	Socket, 5 pin DIN 180 degrees	RADIO
60	282645	Ring	Ring, rubber	
61 62	290842	Skrue	Screw, 3 x 6 mm pan hd Socket, phono	INPUT, OUTPUT
62 63	283773 *	Kontakt Transistor	Transistor	111101, 001101
64	*	Skive	Washer	
		(lev. m/index 63)	(supplied with index 63)	
65	271367	Mutter	Nut, 2.6 mm	
66	296417	Skrue	Screw, 2.6 x 8 mm pan hd	MDV ETITED
67 68	335095 300612A	Vender Klammer	Switch, slide Guide, plastic	MPX FILTER
69	980379	Transformator	Transformer, oscillator	
70	365682	Vender	Switch, toggle	BIAS SELECTOR
71	374834	Skive	Ring, felt	1
72	343471	Deksel	Cover, rear	
		1		į l

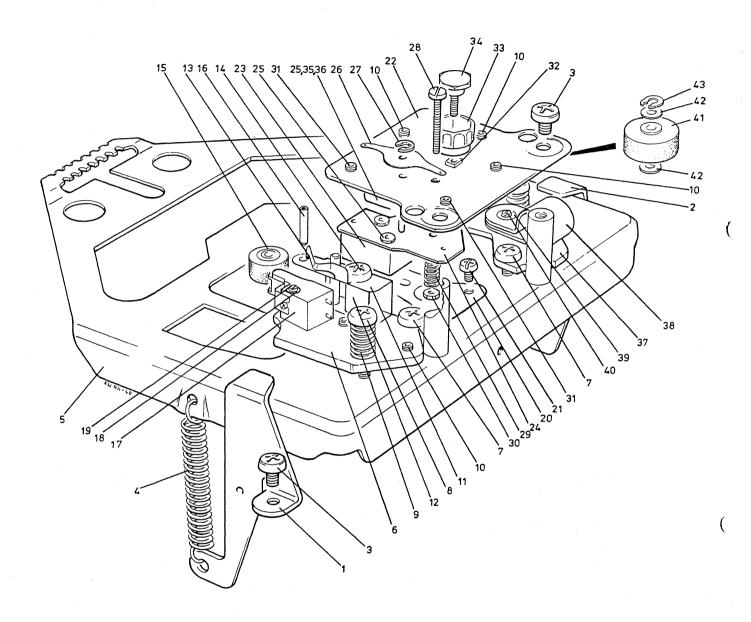
Meter board assembly



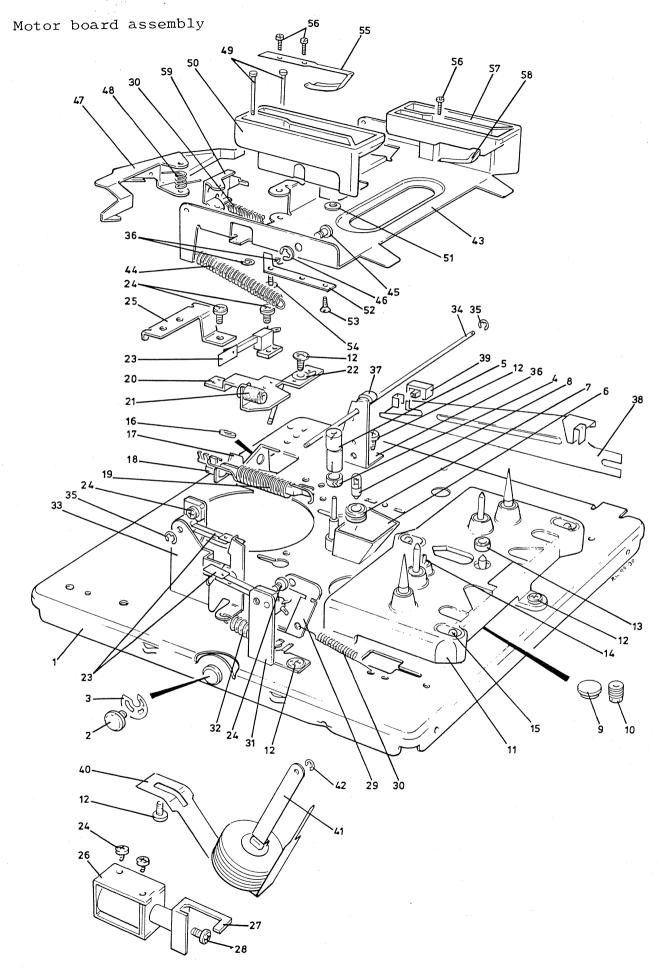
Index		THIS WHEN ORDERING Beskrivelse (merknader)	Description (notes)	Reference
1 2 3 4 5 6 7 8 9 10 11 12	* 401493 402125 316531 347659 346854 315734A 329598 315382 317063 272739 269255 995163	Instrumentkort-enhet Holder Instrument Diode Stag Skrue Ramme Skrue Brakett Brakett Mutter Skrue Kort	Meter board assembly Holder, meter Meter Diode, light emitting Plate Screw, 3.5 x 6.3 mm hex hd, with collar Frame, potentiometer Screw, 3/16" No. 4 pan hd Bracket, microphone Bracket Nut, plate Screw, 3 x 4 mm pan hd Board, meter	A9
13 14 15 16 17	330195 333909 317415A 995166 995125	Holder Lampe Ramme Brakett Skjerm	Holder Bulb, 10 V 50 mA Frame, potentiometer Bracket, headphone Screen, with insulation	



		IHIS WHEN ORDERING		
Index	Ordering No.	Beskrivelse (merknader)	Description (notes)	Reference
	*			
	í I	Fremdrifts-enhet	Drive assembly	C
1	400092	Motor	Motor	Capstan
2	377084	Plate	Plate, mounting, capstan motor	
3	346854	Skrue	Screw, 3.5 x 6.3 mm hex hd, with collar	
4	403174	Skrue	Screw, 2.6 x 3.5 mm pan hd	
5	375051	Hjul	Pulley, drive	
6	994111	Svinghjul	Flywheel	
		(parvis tilpasset,	(supplied in matched pairs and	
		og med indeks 7)	with index 7)	
7	994183	Ring	Belt, drive, rubber	
8	285369	Skive	Washer, 6 x 2.7 x 0.5 mm, plastic	. '
9	375086	Motor	Motor, non-cogging	Supply
10	284823	Motor	Motor	Take-up
11	269255	Skrue	Screw, 3 x 4 mm pan hd	
12	306775	Skjerm	Screen	
13	319506	Bånd	Strap, plastic	
14	994113	Aksel	Spindle, tape reel	
		(lev. m/index 15)	(supplied with index 15)	
15	213826	Ring	Ring, retaining, external, 6 mm	
16	309600	Ring	Belt, drive, rubber	
17	379117	Brakett	Bracket, support, counter	
18	280132	Teller	Counter	
19	994184	Trekkmagnet	Solenoid	L1, L2, Start solenoid
20	264212A	Skrue	Screw, nylon	·
21	995101	Klammer	Bracket	
22	302300	Klammer	Bracket	*
23	300942A	Hvlse	Housing, rubber	
24	202684	Klammer	Clamp, cable, nylon, 5 mm	

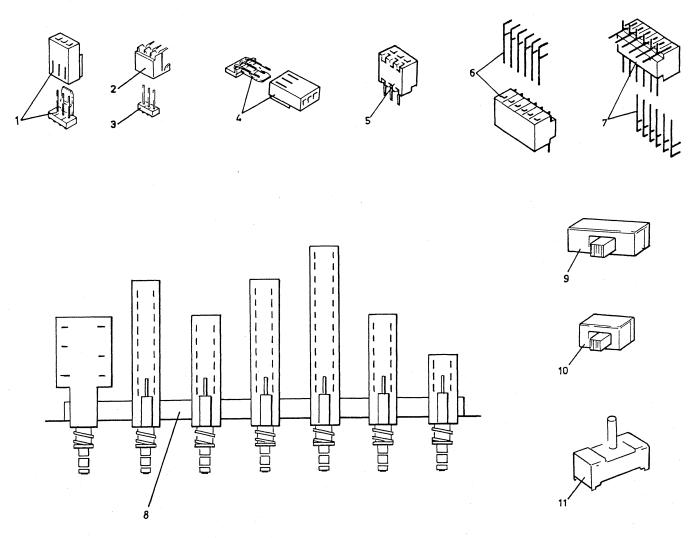


Γ	SPECIFY	THIS WHEN ORDERING		
Index			Description (notes)	Reference
-	J. G. Hing 140.			
1	*	Hodebro-enhet	Head plate assmbly	
1	304333A	Arm	Bracket, guide, head	
2	345676	Arm	Bracket, guide, head plate, right	
3	269255	Skrue	Screw, 3 x 4 mm pan hd	
4	287732	Fjær	Spring	
5	*	Plate	Plate, mounting, head	
6	348061	Plate	Plate, pressure, left	
7	292523	Skrue	Screw, 3 x 8 mm pan hd	
8	293852	Skrue	Screw, 3 x 15 mm pan hd	1
9	240406A		Spring	· .
10	890002	Skrue	Screw, set, 3 x 7 mm	
11	342307	Bøvle	Bracket, U-shaped, pressure roller	
12	337479A		Spacer	
13	346997	Fjær	Spring	
14	292171	Skrue	Screw, 3 x 12 mm pan hd	
15	333126	Valse	Roller, pressure, rubber	
16	341553	Aksel	Spindle	
17	716481	Hode	Head, erase	
18	356947	Skive	Washer, 1.4 mm	
19	340281	Skrue	Screw, 1.7 x 12 mm pan hd	
20	285699A	Fjær	Spring, flat	
21	294520	Skrue	Screw, 2.3 x 3 mm pan hd	<u> </u>
22	352608	Plate	Plate, mounting, head, with nut	
		(lev. m/index 32)	(supplied with index 32)	
23	715546	Hode	Head, record, with plate	
		(lev. m/index 24,25)	(supplied with index 24 and 25)	
24	349742	Plate	Plate, mounting, head	
25	336517	Mutter	Nut	
26	339433	Fjær	Spring	l i
27	234256	Skive	Ring, circlip, 1.9 mm	
28	326660	Skrue	Screw, 2 x 15 mm pan hd	
29	240406A		Spring	
30	335755A	Mutter	Nut, 2 mm	1
31	890001	Skrue	Screw, set, 3 x 6 mm	
32	341395	Hylse	Nut, plastic	
33	347458	Hylse	Knob, black plastic	
34	347385	Skrue	Screw	
35	716480	Нофе	Head, playback, with plate	
		(lev. m/index 25,36)	(supplied with index 25 and 36)	
36	337400	Plate	Plate, mounting, head	
37	317042	Plate	Plate, pressure, right	
38	219221	Klammer	Clamp, cable, nylon, 7 mm	
39	355934	Skive	Washer, $5 \times 2.2 \times 0.3 \text{ mm}$	
40	292487	Skrue	Screw, 2 x 5 mm pan hu	
41	860004A	Hjul	Roller, pressure, rubber	
42	244377	Skive	Washer, 6 x 2.5 x 0.3 mm	
43	212145	Ring	Ring, retaining, external, 2.5 mm	
		•		
1 . 1				



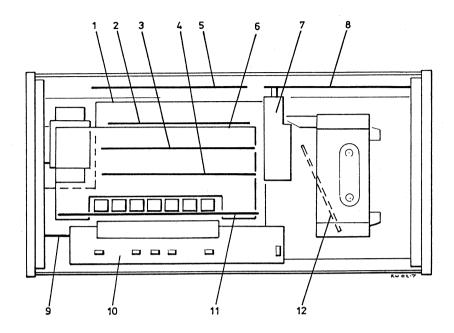
	SPEGIEV	THIS WHEN ORDERING		
Index	Ordering No.		Description (notes)	Reference
	*	Motorplate aphat	Motor board assembly	
1 . 1	1 1	Motorplate-enhet	Plate, support, motor	
1	995145	Plate Aksel	Post, pivot	·
2 3	302020 245649	Skive	Ring, circlip, 4 mm	
4	245649	Klips	Clip	
5	301395	Hylse	Cam, nylon	1
6	301747A		Reflector, illumination	
7	285720	Tube	Grommet, rubber	
8	995152	Lampe	Bulb, 14 V 80 mA, with leads	l
9	355014	Plate	Disc, thrust bearing	First version
10	371351	Skrue	Screw, nylon	Second version
11	994117	Plate	Plate, mounting, flywheel	ļ
12	346854	Skrue	Screw, 3.5 x 6.3 mm hex hd, with collar	1
13	207173	Lager	Bearing, 2.5 mm	1
14	304326	Plugg	Guide, cassette	
15	303622	Kule	Ball, bearing	
16	217152	Skive	Washer, 9 x 4.3 x 0.8 mm	
17	301323	Arm	Lever, solenoid	
18	344132	Arm Fiær	Arm Spring	1
19 20	304685 994112	Fjær Brakett	Spring Bracket, with spindle	l
20	202303	Tube	Tube, rubber	
21	223675	Loddeøre	Tag, solder, 4.2 mm	
23	284119	Vender	Switch, leaf, n/o	MS1 cassette, MS2 slide
~ 1	1 -0 : 119			MS3 record
24	269255	Skrue	Screw, 3 x 4 mm pan hd	[·
25	318392	Klammer	Clamp	1
26	354001	Magnet	Solenoid	Eject
27	351732	Arm	Arm, solenoid, plastic	1
28	290842	Skrue	Screw, 3 x 6 mm pan hd	
29	353140A	The state of the s	Lever	
30	293824	Fjær	Spring	
31	303004	Brakett	Bracket, support, leaf switch	
32	313183	Fjær	Spring	· · · · · · · · · · · · · · · · · · ·
33	346732	Brakett	Bracket, support, cassette drawer	
34	301668	Aksel	Spindle Ring circlip 1.5 mm	
35 36	237970 347357A	Skive Brakett	Ring, circlip, 1.5 mm Bracket, support, cassette drawer	
36 37	347357A 351581	Strømpe	Sleeve, rubber	
38	345668	Arm	Arm, switch	
39	348887	Vender	Switch, slide	S9
40	995134	Belg	Bellows, with flat spring	
41.	360129	Arm	Arm, bellows	
42	234256	Skive	Ring, circlip, 1.9 mm	
43	300490A	1	Bracket, cassette drawer	· ·
44	289413	Fjær	Spring	
45	304678	Tapp	Post, pivot	
46	230542	Skive	Ring, circlip, 2.3 mm	
47	287380A		Arm	,
48	365130	Fjaer	Spring	
49	301316	Aksel	Post, pivot	
50 51	994120	Styring	Guide, cassette, left Washer 7 x 3 2 x 0 5 mm	
51 52	215320	Skive Brakett	Washer, 7 x 3.2 x 0.5 mm Bracket, bellows	
52	995135 234206	Skrue	Screw, plate, 3/8" No. 4 csk hd, black	
54	292875	Skrue	Screw, plate, 3/8" No. 4 flange hd	
55	291791	Fjær	Spring, cassette drawer, left	<u> </u>
56	299606	Skrue	Screw, plate, 3/16" No. 2 pan hd	
57	994121	Styring	Guide, cassette, right	
58	290110	Fjær	Spring, cassette drawer, right	[,
59	304103	Arm	Arm	1
ì	1	'		
	1			[
1	1			
1 1	1 1	1	1	1

Connectors and switches



Index ·	SPECIFY Ordering No.	INS WHEN ORDERING Beskrivelse (merknader)	Description (notes)	Reference
1 2 3 4 5 6	* 995818 995819 995820 340806 316575 996301 318320 996302 996303 996304 996305	Kontakter Kontakt Kontakt Kontakt Plint Kontakt Kontakt Kontakt Kontakt Kontakt Kontakt Kontakt Kontakt	Connectors Connector, 2 pole, small Connector, 3 pole, small Connector, 4 pole, small Connector, fixed, 3 pole Connector, fixed, 3 pole Connector, 3 pole, black Connector, 6 pole, black Connector, 3 pole, black Connector, 6 pole, black Connector, 6 pole, black	
9 10 11	* 408339 348887 335095 365682	Vendere Vender Vender Vender Vender	Switches Switch, push Switch, slide Switch, slide Switch, toggle	POWER, DOLBY NR, DOLBY FITAPE SELECTOR, MONITOR, REC.PRESET S9 S8, MPX FILTER BIAS SELECTOR

Printed circuit boards



Index Ordering No.	#HIS WHEN ORDERING Beskrivelse (merknader)	Description (notes)	Reference
* 1 995155 2 995160 3 995156 4 995158 5 995163 7 995164 8 995157 9 995161 10 995162 11 995159 12 995153	TK plater Kort Kort Kort Kort Kort Kort Kort Kor	Printed circuit boards Board, mother Board, playback amplifier Board, Dolby encoder Board, record amplifier Board, Dolby decoder Board, fader Board, bias Board, oscillator Board, logic Board, function control Board, switch Board, motor control	A1 A6 A5 A4 A7 A9 B2 A8 A2 B3 A3 B1